



General Mills Operations, Inc.
James Ford Bell Technical Center

9000 Plymouth Avenue North
Minneapolis, MN 55427

1997
February 14, 1996

SENT BY FAX TO (612) 296-9707

Ms. Dagmar Romano
Minnesota Pollution Control Agency
Ground Water and Solid Waste Division
Site Response Section
520 Lafayette Road
St. Paul, MN 55155



Dear Ms Romano:

You will receive today, by courier, a report by Barr Engineering which contains the information that was outlined in my letter to you of January 3. As I stated in my prior telephone messages, GMOI apologizes for the delay which resulted from communications problems while I was out of the office; both for my vacation and two other business trips taken just before and after the vacation.

You have indicated to me on the phone that you feel that the full range of information outlined in the attachments to your original request is relevant in this matter. Please review the report and then call me. I would like to schedule a time when Barr Engineering, you and I can discuss this topic further by phone. I believe that direct discussion with you will help me to eliminate the communication problems we have had.

Sincerely,

A handwritten signature in cursive script that reads 'Bill Taylor'.

William Taylor

cc: Bill Crutcher (by E-mail)

Barr
Engineering Company

FAXED

Facsimile Cover Page

Attention: Dagmar Romano

From: Peter Sabes

Regarding: East Hennepin Avenue

Date: 2/14/97 Time: 4:42 Total pages: 16

Fax number: 296-8717 9707-8717

Project number: 23/27 169 PZS 020

Fax only _____ Original to follow X

The information contained in this fax is intended for the use of the individual named above. If this fax is received in error, or if the transmission is incomplete, please call (612) 832-2600 immediately and ask for

Perry

Additional comments:

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Barr

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February 14, 1997

Mr. William Taylor
General Mills, Inc.
James Ford Bell Technical Center
9000 Plymouth Avenue North
Minneapolis, Minnesota 55427

Re: **East Hennepin Avenue Site
Receptor Survey**

Dear Mr. Taylor:

This letter summarizes the results from our receptor survey for the East Hennepin Avenue site. The scope of the receptor survey was as specified in your January 3, 1997 letter to the MPCA.

Vapor Risk Assessment and Survey

The vapor risk assessment (VRA) was conducted at the East Hennepin Avenue Property (Property) on January 30, 1997, in general accordance with the MPCA LUST Guidance Documents, Fact Sheet #3.20 (MPCA, April, 1996). The following tasks were completed:

- A VRA of the sanitary sewer on 21st Street Southeast, between Hennepin and Talmage Avenue.
- A VRA of the sanitary sewer on 20th Street Southeast, between Talmage and Como Avenue.
- Samples of sewage were collected, examined (sheen or odor) and tested for the presence of organic vapor headspace.
- The current owner of the Property (Keith Homstad, BBD Holdings Inc.) was interviewed regarding the presence or absence of vapors/odors in Property structures.
- A VRA of the basements in Buildings 10 and 11 and the tunnel connecting Buildings 7, 10, 11 and 14 was conducted.

The VRA survey locations are shown on Figure 1 and the results are summarized on the logs in Attachment A.

The VRA survey locations are somewhat more extensive than originally proposed. The changes reflect the absence of a sanitary sewer system beneath Talmage Avenue and the absence of a basement in the closest Property building (Building 14) to the former source area.

Sanitary Sewer Vapor Risk Assessment

VRA data were collected from 10 sanitary sewer manholes. Organic vapors, percent oxygen and percent LEL were recorded at three depth intervals within each manhole location (road surface, mid-depth, and bottom). Where possible, a sewage sample was also collected. Organic vapors were recorded as total organic vapors, including background readings. The organic vapor instrument practical detection limit is 1 part per million (ppm).

Recorded field information consisted of sample and background organic vapor readings, "explosivity" meter instrument readings, percent oxygen and LEL, sewage depth, sewer airflow direction and a general sample description.

The sanitary sewer on 21st Street SE begins at the intersection of Talmage Avenue and 21st Street (Sample location #5). Sewage flow is to the north. The sanitary sewer on 20th Street SE begins at Talmage Avenue and 20th Street SE (Sample location #6). The sewage flow is to the south.

Neither organic vapors exceeding the practical instrument detection limit nor vapors exceeding the LEL were detected in the sewage headspace or the sewer manhole atmosphere samples. This data indicate the absence of a vapor risk associated with the sanitary sewer systems in the immediate vicinity and immediately downgradient of the former source area.

Building Vapor Risk Assessment

Keith Homstad was interviewed regarding tenant observations of vapors and odors. Mr. Holmstad's office is located on the Property. Mr. Holmstad reported that neither he nor his current or former tenants had noticed the presence of vapors or unexplainable odors. Mr. Homstad further indicated that the tenants would quickly notice and report any air quality problems.

Barr conducted a VRA on the Property at the locations shown on Figure 2. The results from the survey are shown on the logs in Attachment A. The results from Barr's building VRA indicated that organic vapor readings only exceeded the practical instrument detection limit at one location. The location was a former motorcycle storage and painting room and the organic vapor reading was 1.7 ppm. The air in the room had a slight turpentine or paint odor.

Mr. William Taylor
February 14, 1997
Page 4

Summary

The vapor risk and the water well survey have been completed. The vapor risk survey did not identify the presence of organic vapors at concentrations greater than the practical instrument detection limit that were not otherwise associated with an unrelated building use (motorcycle painting and storage). No evidence of the presence of vapors exceeding the LEL was measured. This data indicates that the vapor risk exposure pathway does not represent a risk to human health or safety in the vicinity of the former source area.

The water well survey did not identify either a public or private well utilized for potable water supply purposes within the search area. This data indicates that the groundwater exposure pathway does not present a risk to human health or safety at this site.

Please call if you have any questions or comments.

Sincerely,



Peter J. Sabee

PJS/dsd

Enclosure

c: William Crutcher III

Martha Brand

Dagmar Romano

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Organic odors were observed in the "Building 7" tunnel, but did not exceed the organic vapor instruments practical detection limit. The odors were traced to a tenant (the ADCON Print Shop).

Vapors exceeding the LEL were not measured. No odors were observed other than those associated with Property building use. The VRA data indicate an absence of organic vapor or explosive vapor risk associated with the former source area.

Water Well Survey

Barr has completed a review of existing data bases relevant to the groundwater receptor survey. The following databases were used in conducting the survey: MDNR Water Appropriation Permit List, MDH Well Abandonment and Public Water Supply Well Databases; MGS County Well Index; the City of Minneapolis Well Record and Records for Installation and Abandonment of Wells and Minneapolis Park Board Wells in the Park System of Minneapolis and Minneapolis Park Board Wells. Barr also contacted the University of Minnesota to verify well use and construction data.

The results from our review of existing public data base records identified 21 wells (not including monitoring or groundwater pump-out wells) within the search area (Figure 3). A summary of the well search data is attached as Table 1. Figure 4 shows the well locations.

The City of Minneapolis data base indicates that Well 200388 could not be located. Barr confirmed this information with a site visit. The structure formerly containing this well (1509 University Avenue SE) no longer exists. The lot which appears to have been the former 1509 University SE address is currently vacant (no structure). This well does not represent an existing or potential source of water for any use.

The University of Minnesota was contacted regarding the 16 wells listed in the public data bases. The University contacts indicated that:

- The water supply for the University's Minneapolis campus is the City of Minneapolis public supply system;
- The University operates three wells. Two of the wells (Wells 412572 and 427501) are used for dewatering in the vicinity of the CME building (an underground structure) and the third well (Well 242219) is used as a source of water for a deionization process in the University Health Sciences building. The well water system is not connected to the building's potable water supply system;
- The remaining wells are out of service or abandoned;
- None of the wells are used as a potable water supply source.

The verified well record data shows no potable water supply wells within the search area.

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Table 1
Well Search Summary of Down Gradient Wells
East Hennepin Avenue Site

Well Unique ID No.	Location by T/R/S	Owner Name	Address	Depth (ft)	Aquifer(s)	Current Well Use	Current Well Status	Date Drilled
200387	29/24/24	Varsity Theater	1308 4th St. SE	376	Multiple — St. Peter, Prairie Du Chien, Jordan	NA - Abandoned	Abandoned (H41687)	04/39
200388		Varsity Cafe	1509 Univ. Ave	382	Multiple — St. Peter, Prairie Du Chien, Jordan	NA - Structure Has Been Demolished	Well Destroyed - Structure Has Been Demolished	05/38
200695		VanCleve Park	15th and Como Ave SE	241	Multiple — St. Peter, Prairie Du Chien	NA - Abandoned	Abandoned	07/10
223842		U of M, College of Education	Mpls. Campus	98	St. Peter & Plattville**	NA - Abandoned/ Out of Service	Abandoned/ Out of Service	10/52
223843		Tandem — Van deGraft Lab	U of WI	381	Multiple — St. Peter, Prairie Du Chien, Jordan	NA - Abandoned	Abandoned/ Out of Service	05/64
233223		McLaughlin Gormley Kmg	1715 5th Ave SE	483	Multiple — Prairie Du Chien, Jordan	NA - Abandoned/ Out of Service	Abandoned (H93543)	-
200389	29/24/25	U of M	17th and Washington SE	102	St. Peter & Plattville**	NA - Abandoned/ Out of Service	Abandoned/ Out of Service	02/48
200390		U of M	18th and Washington SE	72	St. Peter & Plattville**	NA - Abandoned/ Out of Service	Abandoned/ Out of Service	08/42
200391		U of M	Union St.	90	St. Peter & Plattville**	NA - Abandoned/ Out of Service	Abandoned/ Out of Service	02/49
200392		U of M, Lyon Lab	Mikard Hall and Jackson Hall	170	St. Peter	NA - Abandoned/ Out of Service	Abandoned/ Out of Service	03/68
200393		U of M, Coffman Union	Washington Ave SE	408	Jordan & Prairie Du Chien & St. Peter**	NA - Abandoned/ Out of Service	Abandoned/ Out of Service	01/51
200394		U of M	River Rd. E.	81	St. Peter & Plattville**	NA - Abandoned/ Out of Service	Abandoned/ Out of Service	09/42
224277		U of M	Frontier Hall	97	St. Peter	NA - Abandoned/ Out of Service	Abandoned/ Out of Service	12/58

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Table 1 (continued)
Well Search Summary
East Hennepin Avenue Site

Well Unique ID No.	Location by T/R/S	Owner Name	Address	Depth (ft)	Aquifer(s)	Current Well Use	Current Well Status	Date Drilled
224276*		U of M	"Minneapolis"	19	Platteville	NA- Abandoned/ Out of Service	Abandoned/ Out of Service	11/55
224279		U of M	"Minneapolis"	80	Platteville	NA- Abandoned/ Out of Service	Abandoned/ Out of Service	12/57
224281		U of M	"Minneapolis"	38	St. Peter	NA- Abandoned/ Out of Service	Abandoned/ Out of Service	08/59
224282	28/24/25 (cont.)	U of M	"Minneapolis"	90	Multiple — Platteville, St. Peter	NA- Abandoned/ Out of Service	Abandoned/ Out of Service	07/58
224283*		U of M	Frontier Hall	88	St. Peter & Platteville**	NA- Abandoned/ Out of Service	Abandoned/ Out of Service	12/58
242219		U of M Health Sciences	"Minneapolis"	447	Multiple — Jordan, St. Lawrence	Industrial	Lab Deionized Water Source ¹	--
412572		CME Building Well No. 1	500 Pillsbury Dr.	Approx 110	St. Peter	Dewatering	Dewatering	12/80
427501		CME Building Well No. 2	500 Pillsbury Dr.	13	St. Peter	Dewatering	Dewatering	5/85

¹ All drinking water is supplied by the City system. The only possible consumptive use would be for temporary emergency backup which would require additional plumbing and government approvals to connect and hookup.

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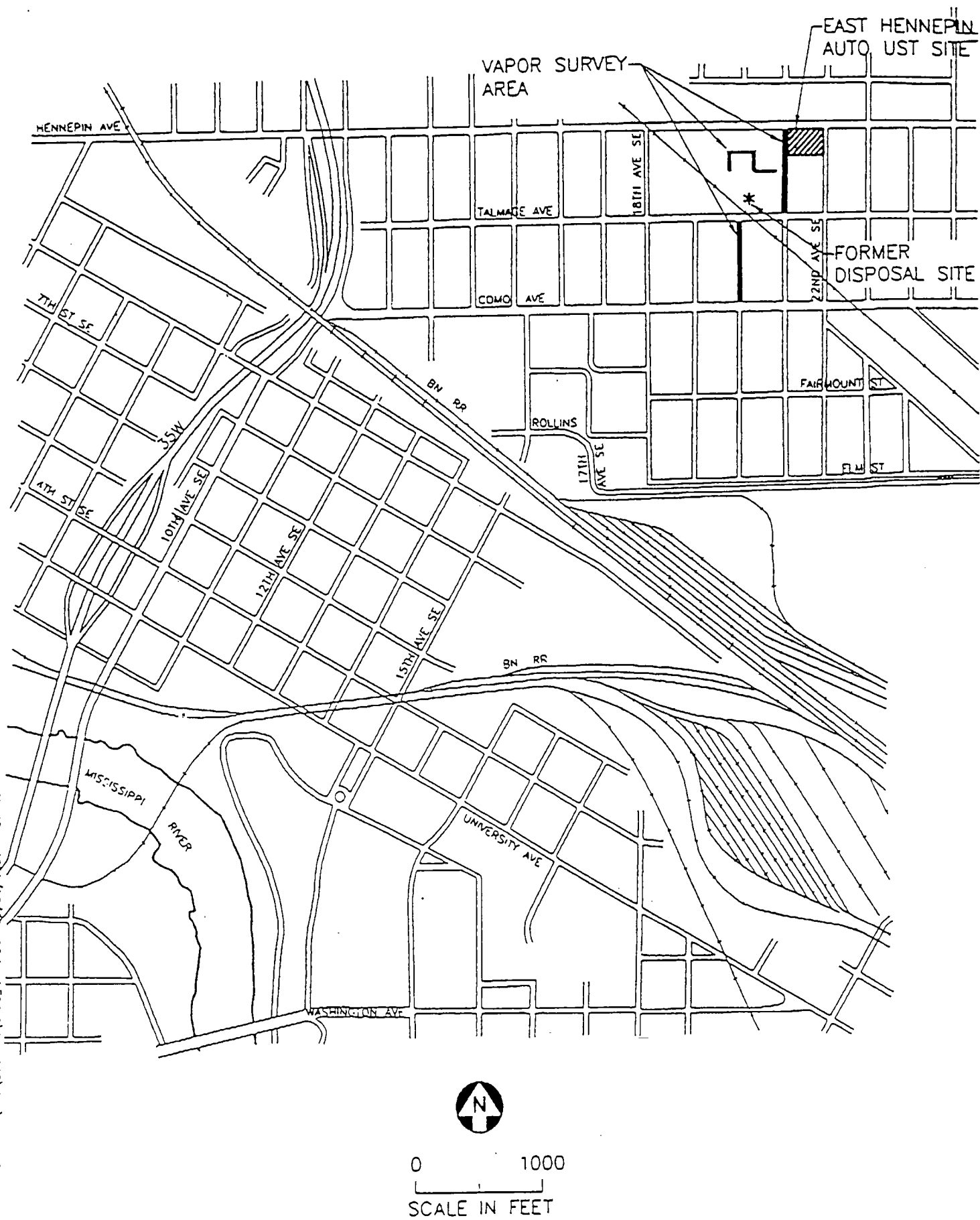
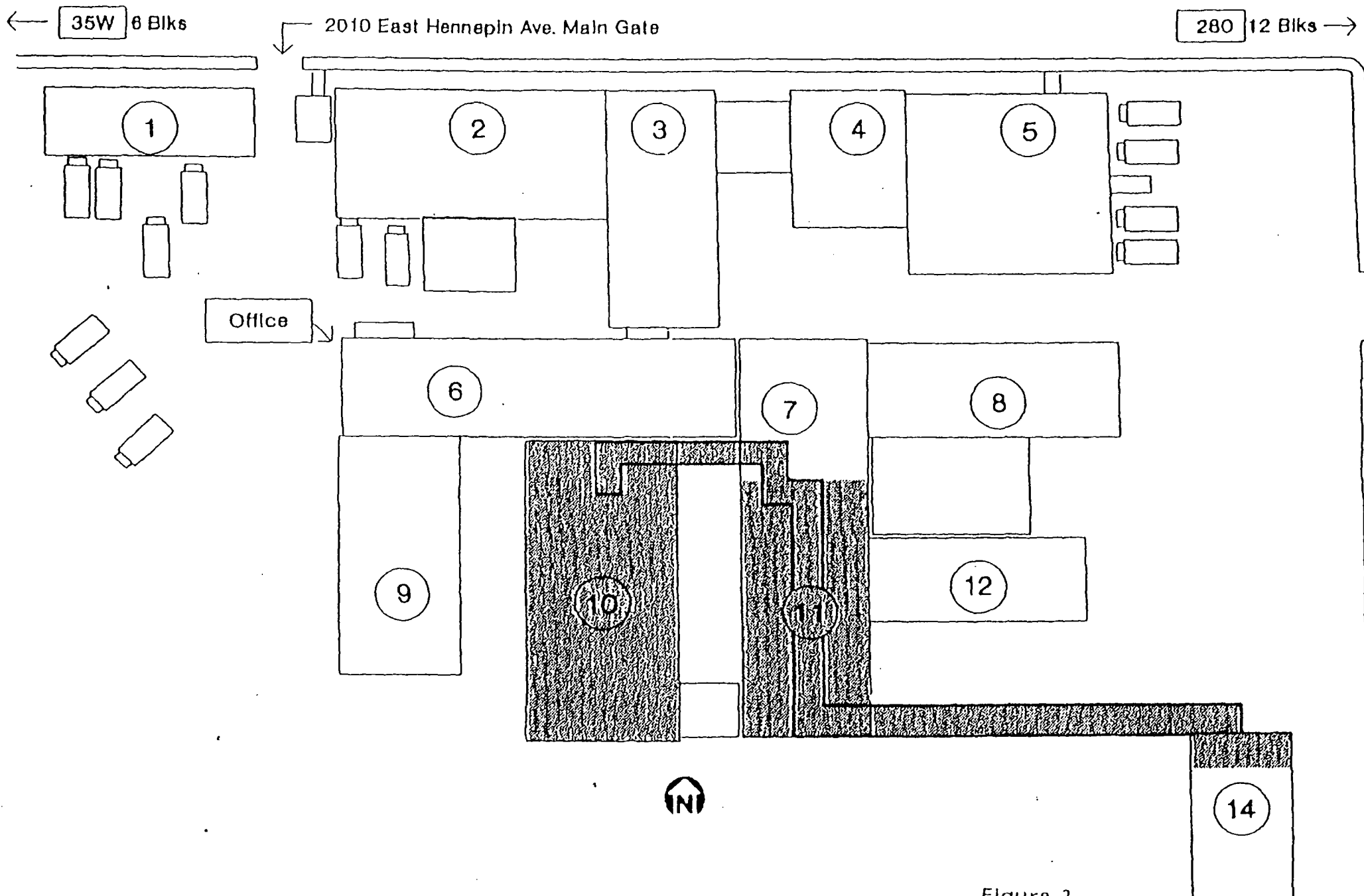


Figure 1
EXTENT OF VAPOR RISK ASSESSMENT





 Tunnel
 Extent of Vapor Risk

Figure 2
 GENERAL MILLS SITE BUILDINGS
 (B.B.D. Holdings, Inc.)

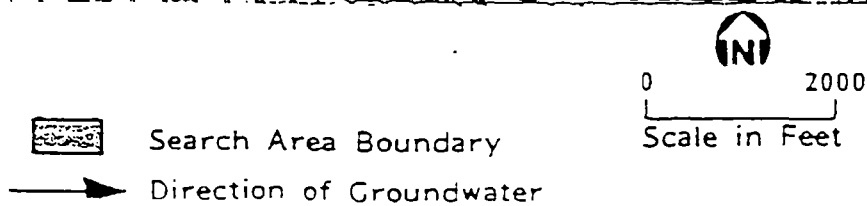
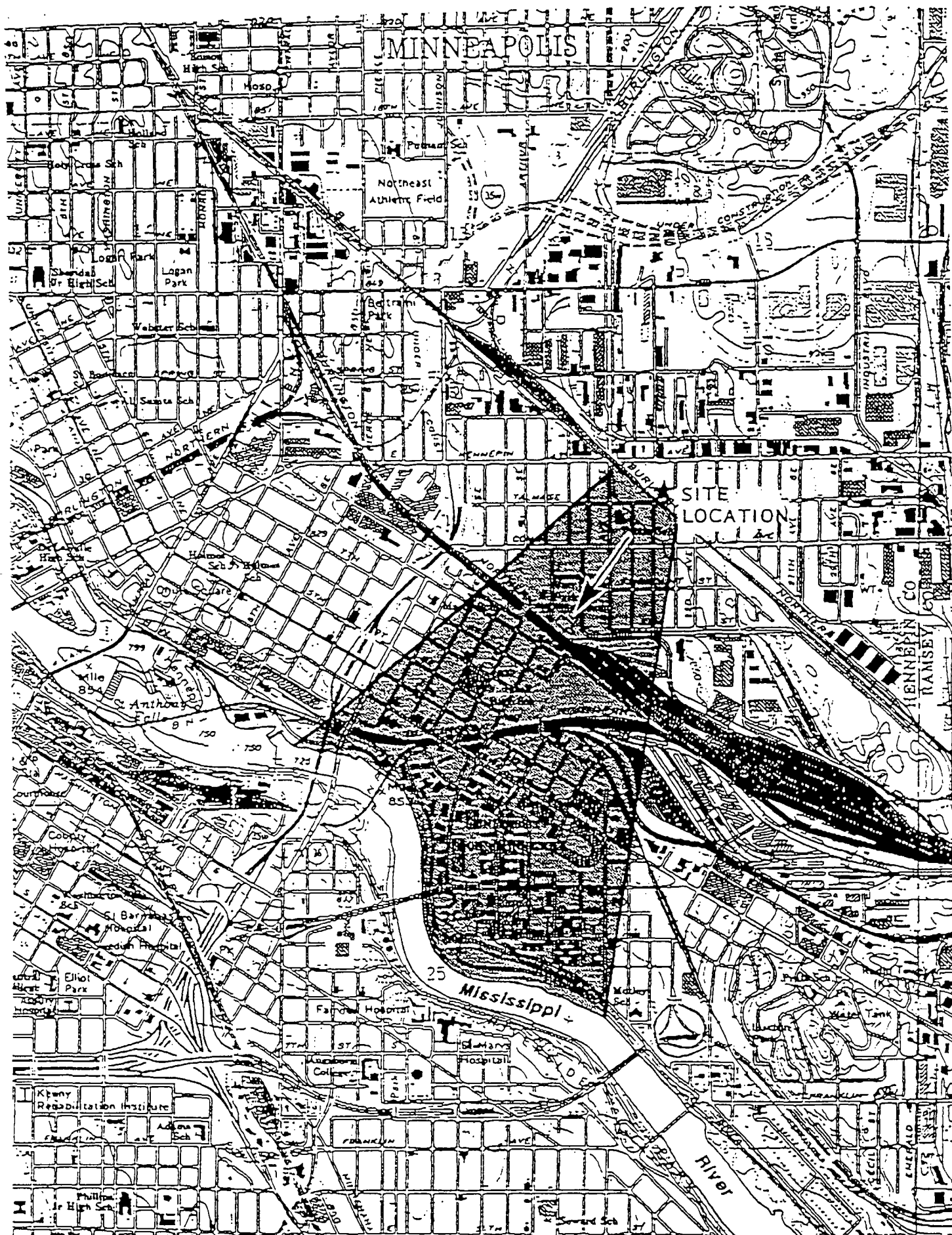


Figure 3
EAST HENNEPIN AVENUE SITE
Proposed Groundwater Receptor
Survey Search Area

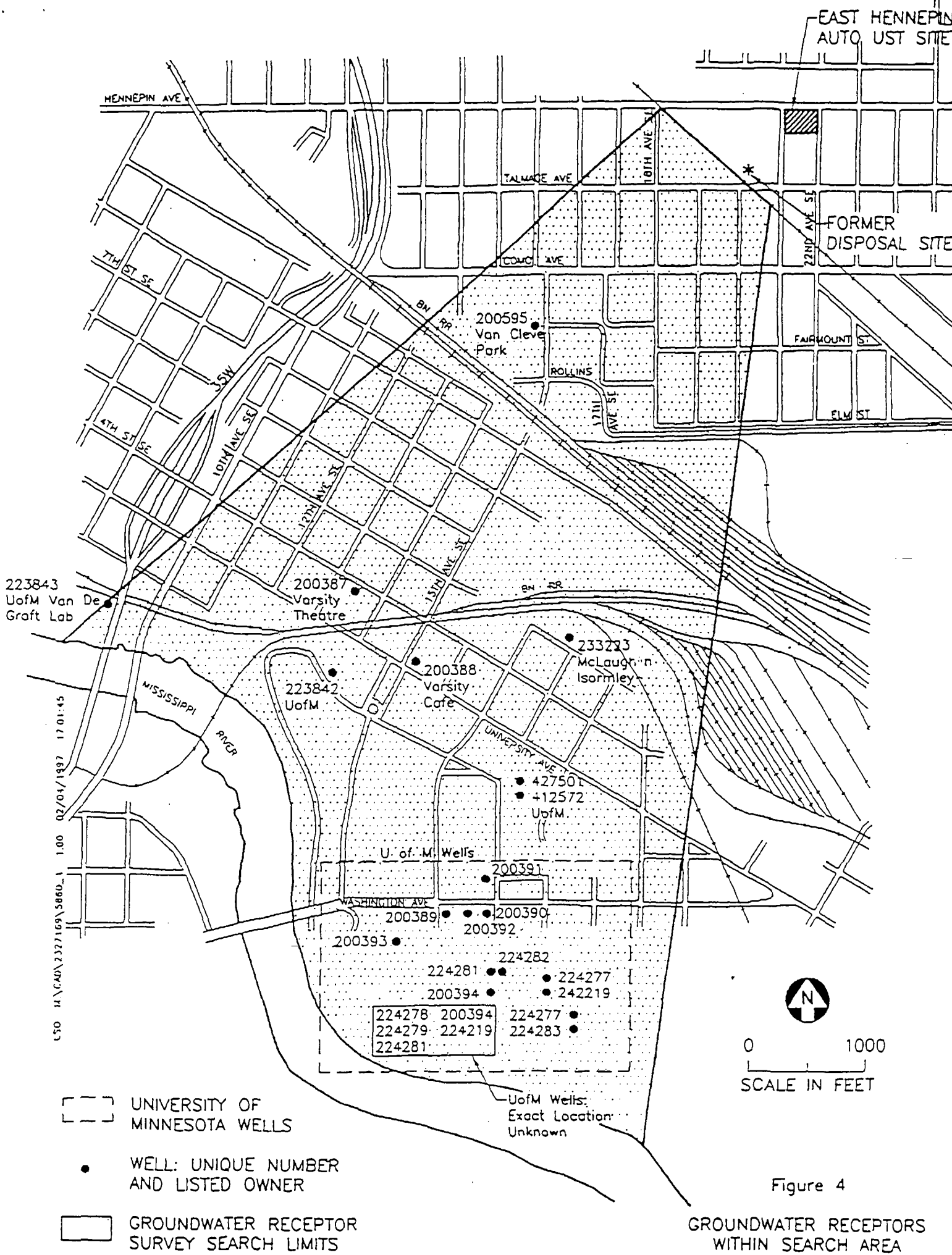


Figure 4

GROUNDWATER RECEPTORS
WITHIN SEARCH AREA

Vapor Risk Survey Sanitary Sewer

Client: General Mills

Site Location: E. Hennepin Ave Site

Project Number: 23/27-169825020

Description of Work Performed: Vapor Survey of Sanitary sewer under 21st & 22nd Streets SE. 5 manholes on each street.

Date(s) of Survey: 1-30-97

Technicians: TLW; DJM

Temperature: 60°F Wind Speed/Direction: 5/N Cloud Cover/Other: M-Cloudy

Calibration Data: PID - HNU DI 101 w/ 58 ppm span gas = 57.1 ppm no change
msd - PAL calibrate / Note PID background ~ 0.3 to 0.4

Vapor Survey Field Analytical Results

Location	Water Depth	Airflow Direction at Manhole	Instrument Readings			Sample Description/Field Data		
			Depth of Measurement	PID (ppm) Total including background	MSA (O ₂ % LEL)	Type	Seen and Odor	Headspace (ppm)
21 st St	14'	in	surf	0.8	20.8/070	water	N/A/sewer	0.3
			mid	0.4	20.8/070	flow to Hennepin		
			water	0.3	20.8/070			
#2 ~14'	out	surf	0.3	20.8/070	water	N/sewer	0.1	
	to	mid	0.3	20.8/070				
	13	water	0.3	20.8/070				
#3 ~12'	?	surf	0.2	20.8/070	water	N/sewer	0.5	
		mid	0.2	20.8/070				
		water	0.2	20.8/070				
#4 ~11'	out?	surf	0.3	20.8/070	No Sample Possible			
		mid	0.3	20.8/070	No water - in line - failed			
	use -	water	0.3	20.8/070				
#5 ~9-10'	sl in	surf	0.2	20.8/070	water	N/sewer	0.6	
		mid	0.3	20.8/070	Dead end / standing water			
		Base	0.3	20.8/070				
22 nd St ~11'	sl in	surf	0.3	20.8/070	No water / Dead end /			
		mid	0.3	20.8/070	flow to Congo			
		Base	0.3	20.8/070				

Others on Site/Contacts: Mpls Sewer Dept

Other Observations: Truck #15077

Erwin Gelschus } mpls
Eugene Maxey } crew

Vapor Risk Survey

Sanitary Sewer

Page 2

Client: General Mills
 Site Location: E. Henn Avenue
 Project Number: 23/27-169 PZ5020
 Description of Work Performed:

Date(s) of Survey: 1-30-97

Technicians: TLW, DJM

Temperature: _____ Wind Speed/Direction: _____ Cloud Cover/Other: _____

Calibration Data: see Page 1

Vapor Survey Field Analytical Results								
Location	Water Depth Approx	Airflow Direction at Manhole	Instrument Readings			Sample Description/Field Data		
			Depth of Measurement	PID (ppm)	MSA (O ₂ /LEL)	Type	Shocks and Odor	Headspace (ppm)
(N): Talray ↓ Como (S)	25 th = 7	10'	2	Surface	0.3	20.28/070	water	NA
				mid	0.3	20.2/070		
				Base	0.3	20.5/070	Flow + Drop to	6-0
	#8	11.5'	in	Surface	0.3	20.8/070	water	N/sewer 0.5
				mid	0.3	20.6/070		
				Base	0.3	20.9/070		
	#9	12'	31 in	Surface	0.3	20.8/070	water	N/sewer 0.6
				mid	0.3	20.5/070		
				Water	0.3	20.5/070		
	#10	13'	31 in	Surface	0.3	20.8/070	water	N/sewer 0.2
				mid	0.2	20.5/070		
				water	0.3	20.5/070		
	#11	14'		Surface	Surface	Sewer	- not done	
				mid				
				water				

Others on Site/Contacts: Keith Homstad BBD Holdings Inc. 378-1144

Other Observations:

Vapor Risk Assessment Log; Buildings

Client: General Mills

Site Location: E. Hennepin Avenue

Project Number: 23/27 - 169 PZ 5020

Description of Work Performed: PID & O₂ & %LEL in Floor Drains, Sumps, other locations of Tunnels & 1/2 basements in buildings 11 & 10.

Date(s) of Survey: 1/30/97

Technicians: TLW, DJM

Temperature: 78.0° Wind Speed/Direction: NA Cloud Cover/Other: NA Inside

Calibration Data: PID - HNU 81101 w/ 58 ppm span gas = 57.1 ppm no change
MSA-DAL calibrate / PID background 0.2-0.4

Vapor Risk Assessment Field Analytical Results				
Building	Measurement Location	Analytical Results		Comments and Other Observations
		PID (ppm)	MSA (O ₂ /%LEL)	
14 → 11 Tunnel	Sump Pump 1	0.4	20.8/070	
	Sump Pump 2	0.4	20.8/070	
	Floor Drain 1	0.4	20.8/070	
	Floor Drain 2	0.4	20.8/070	
	Floor Drain 3	0.4	20.8/070	
	Ambient Air	0.4	20.8/070	
Building 11	Ambient Air	0.3	20.8/070	
Tunnel 1/2	Motorcycle Storage Room	1.7	20.8/070	Paint or paint thinner odor in room
Basement	Floor Drain 4	0.3	20.8/070	
	Floor Drain 5	0.3	20.8/070	
	Floor Drain 6	0.4	20.8/070	
	Floor Drain 7	0.2	20.8/070	
Building 7	Ambient Air	0.3	20.8/070	
Tunnel				
7 → 10	Ambient Air	0.7	20.8/070	slight odor in air from HAZCON Print Shop
Tunnel	Floor Drain 8	0.7	20.8/070	
10 - tunnel	Floor Drain 9	0.5	20.8/070	
1/2 basement	Floor Drain 10	0.6	20.8/070	

Others on Site/Contacts:

Other Observations:

Vapor Risk Assessment Log; Buildings

Page 2

Client: General Mills

Site Location: E. Hennepin Avenue

Project Number: 23 / 27-169 P 25 020

Description of Work Performed: Vapor Risk Assessment Tunnels buildings

Date(s) of Survey: 1/30/97

Technicians: TLW + JDM

Temperature: _____ Wind Speed/Direction: _____ Cloud Cover/Other: _____

Calibration Data: see page 1

Vapor Risk Assessment Field Analytical Results				
Building	Measurement Location	Analytical Results		Comments and Other Observations
		PID (ppm)	MSA (0.1%LEL)	
1B - tunnel	Floor Drain 11	0.6	20.8/070	
C 42 basement	Floor Drain 12	0.5	20.8/070	
	Floor Drain 13	0.6	20.8/070	
	Floor Drain 14	0.3	20.8/070	Subground 0.3-0.4
	Floor Drain 15	0.3	20.8/070	Floor Grates
	Floor Drain 16	0.3	20.8/070	↓
	Floor Drain 17	0.3	20.8/070	↓
	Hole in Wall	0.3	20.8/070	↓
	Floor Drain 18	0.2	20.8/070	
	Under Sinks	0.2	NM	
	Elevator Shaft	0.2	20.8/070	
	Floor Drain 19	0.2	20.8/070	
	Floor Drain 20	0.3	20.8/070	Floor Grates
	Floor Drain 21	0.2	20.8/070	↓
	Ambient Air	0.2	20.8/070	
14 1st Floor	Floor Drain 22	0.4	20.8/070	
	Closet	0.4	20.8/070	
	Hole in Wall	0.4	20.8/070	

Others on Site/Contacts: Keith Hunsford BBD Holdings Inc.
378-1144

Other Observations:

Conent walls & Floors in good condition. Buildings & tunnels do not have structural cracks in floors, walls, ceilings. Potential vapor routes appear mainly limited to floor drains. No basement in building 14.

437

396 - Z BLANK (5040) - Rick: Lavinie

44 - U with Carbide (1460) - Jeng ST: Jeng

151 - Pioneer Patel (2560) - Jeng ST: Mike C.

443:

44 - GR (1660)